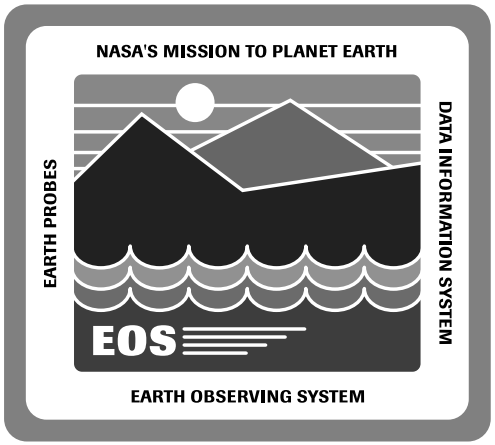


ECS Evaluation Package (EP)

EP6 Evaluation Readiness Review

Naveen Hota

November 17, 1995

(301)-925-0542; nhota@eos.hitc.com

EP6 Evaluation Readiness Review

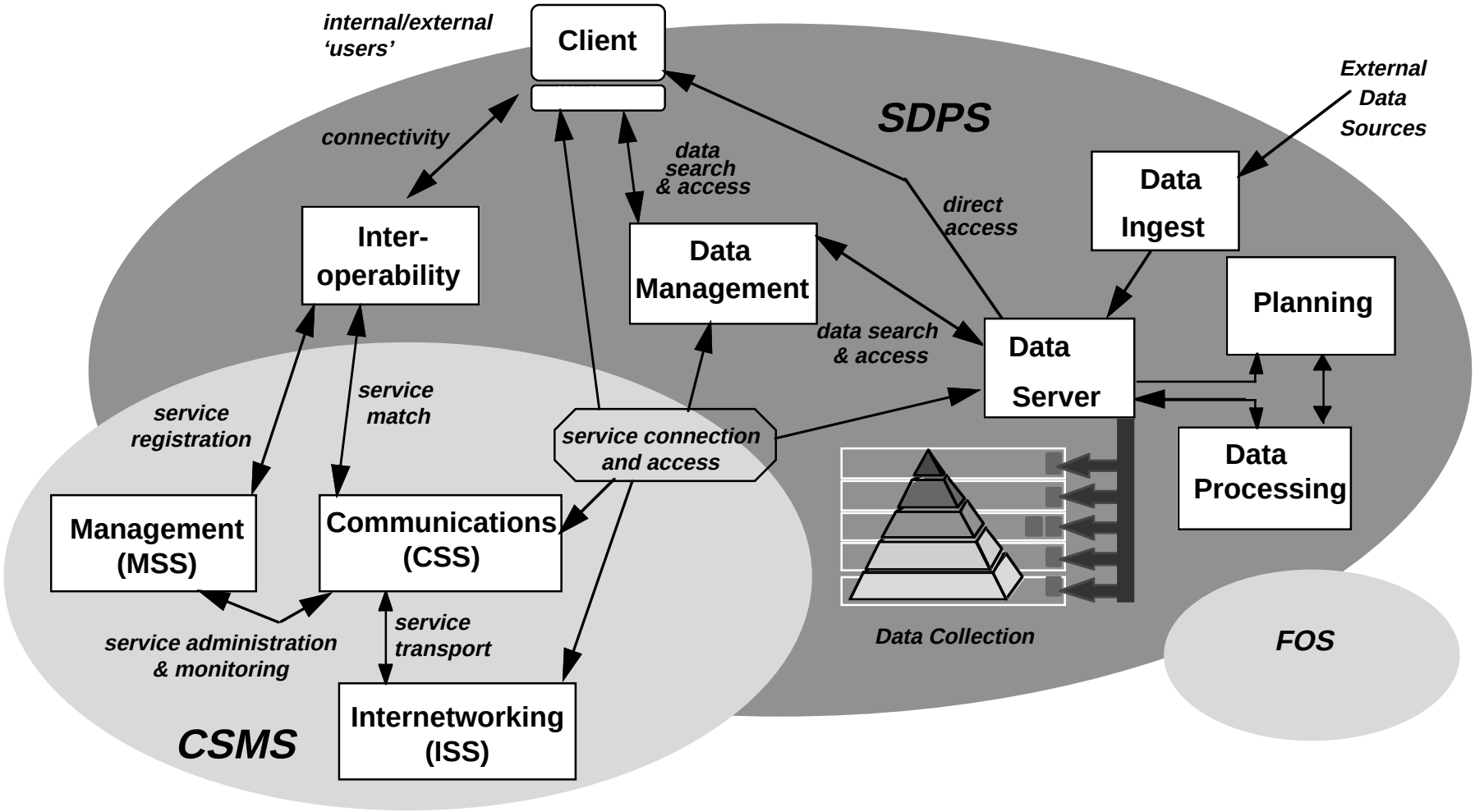
Purpose of EP6 ERR

- Review installation and system demonstration
- Review preparations for Evaluation Period
- Signal the beginning of the Evaluation Period

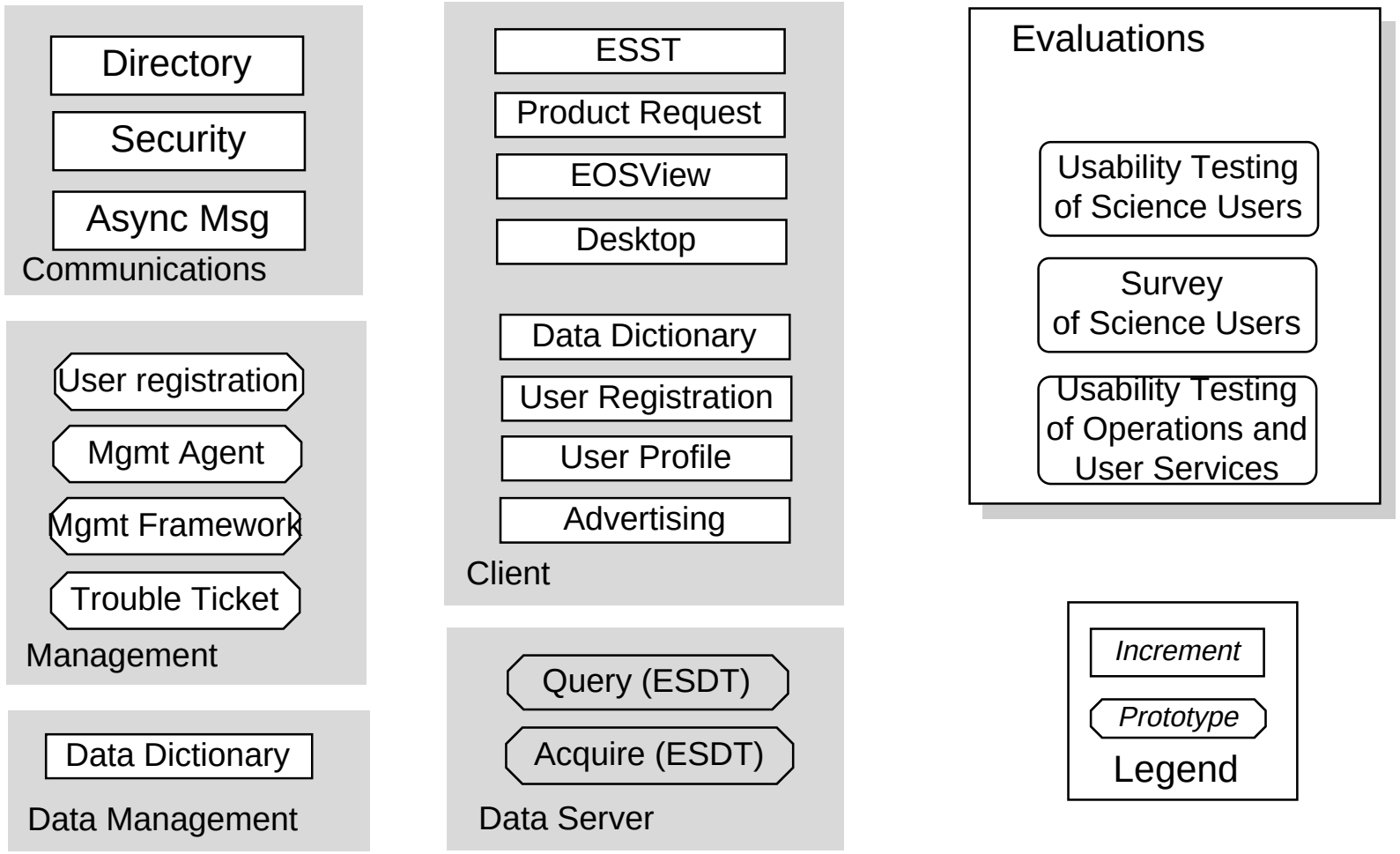
Agenda

- 3:30 EP6 Overview & Status - Naveen Hota
- 3:45 EP6 Science Data and Scenarios - Karl Cox
- 3:55 EP6 Software Inspections - Alfreda Hall
- 4:05 EP6 Installations Status - David Warr
- 4:20 EP6 Evaluation Plan Update - Jan Poston
- 4:40 Wrapup - Naveen Hota

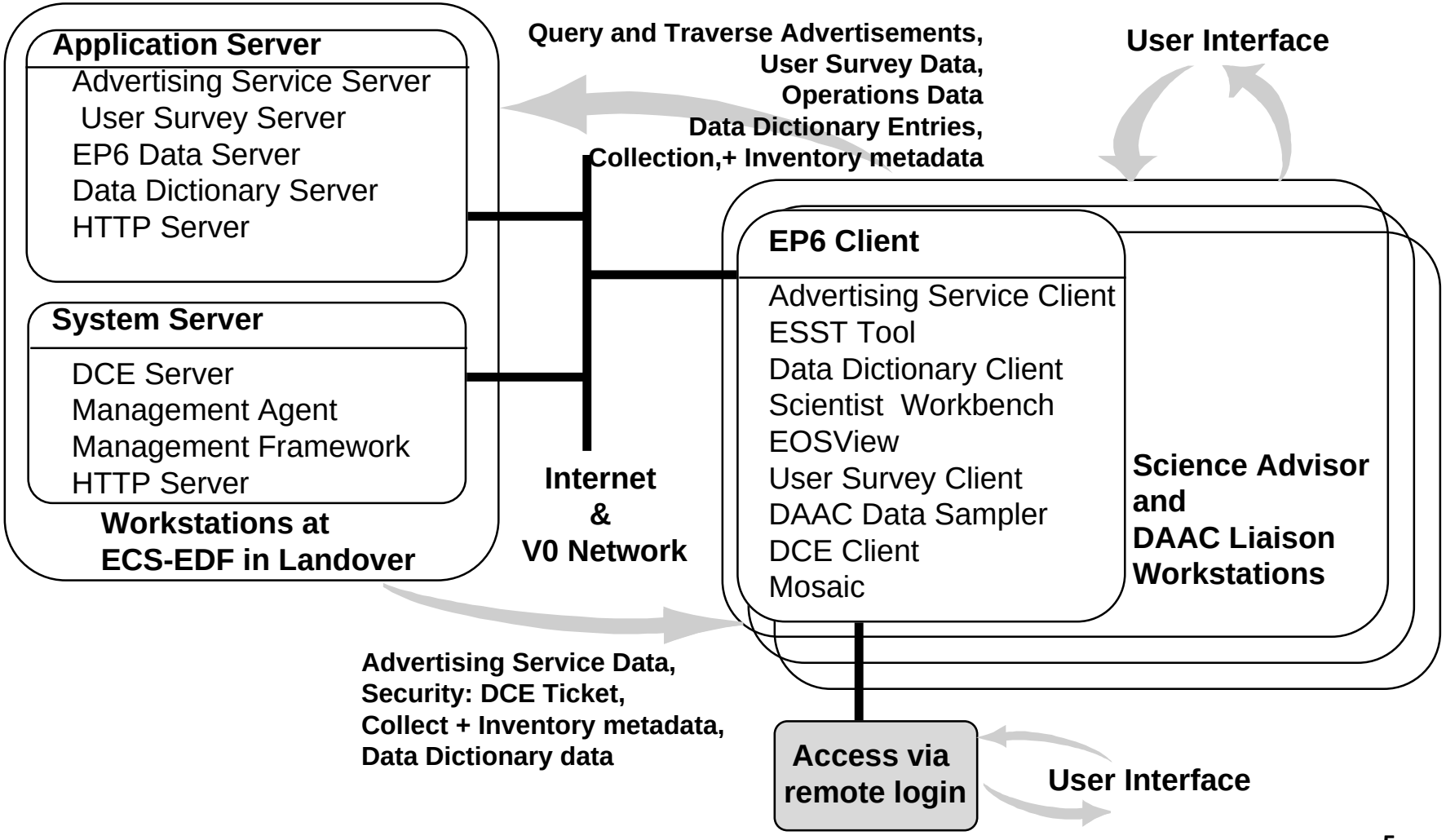
ECS EP Context



Summary of EP6



EP6 Configuration (Contd.)



Evaluation Assistance

EP6 Brochure

- **EP Context**
- **Demonstration Tour**
- **Contacts for more information**
- **UNIX setup**
- **Advisories**

Science User Scripts for Exercising EP6

- **Detailed script**
- **Available on EDHS (http://edhs1.gsfc.nasa.gov)**

Basic On-Line Help

- **Pull Down Menu on ECS Workbench**
- **Context Sensitive**

Trouble TIcket

- **Evaluator is the evaluator of the Trouble Ticketing (EP6) while reporting a problem**

EP6 Help Desk

- **1-800-ECS-DATA**
- **help@eos.hitc.com**

Help Desk for EP6

Two Ways to Contact Help Desk

- **1-800-ECS-DATA**
- **help@eos.hitc.com**

Help Desk Hours: M-F 8-6

- **After Hours On-Call Pager Notification**

Help Desk is First Line of EP Support

- **Trouble Ticket for Unresolved Issues**

Help Desk Support

- **First Line of Support**
  - **User Account Information**
  - **DCE Accounts**
  - **Client Host Information**
  - **Server Status**
- **Referral to EP6 Procedures on EDHS**
  - **http://edhs1.gsfc.nasa.gov**
- **Trouble Ticket Procedures**
  - **Evaluator will be asked to enter his own TT**
  - **If he/she can't or won't then help desk will enter TT**

M&O for EP6 Evaluation Period

- **Operations via HP OpenView**
  - **EDF Server Status**
  - **Remote DAAC EP6 Systems**
  - **DCE Functionality**
  - **Specific EP6 Server Processes**
- **Maintenance of Trouble Tickets**
  - **NCRs for Unresolved Trouble Tickets**
  - **Developers Responsibility to Close NCRs**
- **Maintenance of Hardware**
  - **HTSC and DAAC Liaisons**
  - **Backups of EP Systems**

Evaluation Readiness Status

Non Conformance Report (NCR) Status

- **Status 11/16: One Severity Level 1 NCR, #190 - HP port of ESST**
- **Status 11/17:**
- **Complete NCR summary in D. Warr presentation**

EP6 Client Installation

- **EP6 Clients on DAAC liaison workstations ready ---------**
- **Clients installation at Tirekickers in Progress**

NCR 190: HP Client

Description

HP Client - client software running on HP platforms is not ready

Ported and being tested

Except for temporal selection/search, rest of the functionality is working

Work Around if Not Resolved

Evaluate temporal selection/search on SUN platforms via remotely logins

EP6 Deployment and Evaluation Schedule

	November	December	January	February
EP Evaluation Readiness Review	11/17			
Science Advisor Installation Installed remotely by ECS EP I&T	11/20-12/1			
Independent Evaluations response via Survey	11/27? ----------	----------	----------	1/31
Usability Testing	11/27? ----------	----------	----------	1/31
EP6 Evaluation Report				2/29

EP6 Science Data and Scenarios

Karl W. Cox
Science Office

November 17, 1995

EP-6 Capabilities: A User's Perspective

Capability	Available in EP-6
User Registration and Preferences	Yes
View Advertisements	Yes
Advertisement creation	Yes
Look up Terms in Data Dictionary	Yes
Search and Access Documentation	No document data server
Search for Science Data	Spatial searches only by horizontal bounding coordinates, cannot include pole in interior or cross the international dateline.
Obtain Browse	Yes, but thumbnails not supplied
View Browse Product	Yes
Order Science Data	Delivery via ftp, only
Subsetting	No
Subsampling	No
Acquire tool	Yes
Integrate tool with Desktop	Yes
Enter Subscriptions	No
Distributed Query/Access	No DIM
Site Query/Access	No LIM
On-line Help	No
Interoperability with V0	No

Summary of EP-6 Data Sets

Data Set	Spatial Coverage	Temporal Coverage	No. of Granules	Size (MB)	Format	Browse (MB)	Source of Data	Source of Metadata
AVHRR, 1 km, 10-day composite NDVI	North America (L3)	Apr92 - Sep 92	18	135 [1]	Raster Image[2]	0.67	EDC	PW1
ERBE S-4G 2.5 deg., equal angle	Global (L3)	Jan87 - Dec89	36	13.2	HDF	0.34	LaRC	V0
ISCCP_C2 2.5 deg., equal area	Global (L3)	Jan87 - Dec89	36	4.5	HDF	0.35	LaRC	V0

1 TheUNIX compress command has been employed on the NDVI granules to reduce their size for efficient storage on the EP-6 data server and transmission to the user. The user is expected to uncompress these granules after receipt using the standard UNIX uncompress command.

2 The image size is 15568 pixels wide by 8674 lines.

Grid

Browse Imagery

- The HDF-EOS specification and definition of the EOS Browse Product were underway at the time that these browse images had to be produced.

  Consequently, the structure and content of the EP-6 browse imagery do not reflect or represent any ECS standard.

  Each browse file includes an ASCII a label and file description containing some metadata information.
- ERBE browse imagery contain 8-bit raster images of the longwave flux, shortwave flux and albedo.

  For April 1997, however, no browse file was generated.
- Browse imagery for each of the North America, 1km NDVI granules were produced by averaging 16x16 adjacent pixels.
- Each ISCCP C2 browse file contains eight 8-bit raster images generated for the monthly average of each of 3-hourly interval during the day, and one 8-bit raster image of the overall monthly average.

Science Scenarios

Two End-to-End Scenarios:

- **Monitoring of Sugarland Run Watershed**

  The investigator (Jerry Garegnani) wants to determine correlations between land use patterns and water quality of Sugarland Run, a Potomac river tributary. This involves building a database documenting changes within the watershed, including vegetation over the course of the growing season.

  As written, the scenario involves MODIS, ASTER and Landsat-7 data, as well as a one-time order of DEM data. The main adjustment of this scenario is the use of 1 km AVHRR-derived NDVI for North America.

- **Obtaining Information/Data for a Review Paper**

  The investigator (Bruce Barkstrom) wants to prepare a review paper about the Earth Radiation Budget, including recent developments of the ECS instruments.

  As written, the scenario involves CERES data, as well as bibliographic references. The main adjustment of this scenario is the use of ERBE and ISCCP data.

EP6 Software Inspections

Alfreda Hall
QA

November 17, 1995

EP6 Design Inspections Metric Analysis

Observations:

- **The Design Inspection process was utilized prior to the EP6 Design Review.**
- **The Design Inspection process identified 95 total Design errors.**
- **The Detailed Design Inspection process identified that one error was found for every 1.2 hours invested in inspections (118 - sum of # participants x time spent conducting the inspection per inspection).**
- **The average time spent conducting each inspection was 1.28 hours.**
- **The effectiveness of the inspection process was 3.78 (out of 5.0).**
- **In general, EP6 detailed design inspections followed the process identified in the ECS Software Inspections Process Project Instruction (SD-1-004). However, 33% of the inspections did not allow at least 48 hours for reading prior to the inspection meeting (i.e., inspection materials were not distributed at least 48 hours prior to the meeting).**

EP6 Code Inspections Metric Analysis

Observations:

- **The Code Inspection process was utilized after the EP6 Design Review.**
- **The Code Inspection process identified 144 total coding errors.**
- **The Code Inspection process identified that one error was found for every .95 hours invested in inspections (137.5 - sum of # participants x time spent conducting the inspection per inspection).**
- **The average time spent conducting each inspection was 1.54 hours.**
- **The effectiveness of the inspection process was 4.38 (out of 5.0).**
- **In general, EP 6 code inspections followed the process identified in the ECS Software Inspections Process Project Instruction (SD-1-004). However, 46% of the inspections did not allow at least 48 hours for reading prior to the inspection meeting (i.e., inspection materials were not distributed at least 48 hours prior to the meeting). Of the 46%, 15% of the inspections appeared to be affected by not allowing the inspectors to have sufficient reading time prior to the inspection (i.e., none of the inspectors completed all of the reading).**

EP6 Software Inspections Summary

Observations:

- **In general, EP6 software inspections followed the process identified in the ECS Software Inspections Process Project Instruction (SD-1-004).**
- **13% increase in the number of inspections which did not allow at least 48 hours for inspectors review prior to the inspection meeting**
- **Effectiveness of the inspection process improved from the design phase to the coding phase (4.38 out of 5.0)**

Recommendations:

- **Inspections materials must be distributed at least 48 hours in order to allow sufficient time for the inspectors to effectively review the product and be prepared to participate in the inspection.**
- **The amount of material (e.g., design or code) to be inspected should be of reasonable size so that the inspection can be completed in a two hour meeting.**
- **Until the inspections process is widely understood, an overview of the inspection process at the beginning of each phase should be incorporated into the start-up activities.**

EP6 Installation Status

David Warr
I&T

November 17, 1995

Overview

- NCR Status
- Operational System Test
- Installations DAACs Summary
- Installation Plan for Tirekickers

NCR Status

Unresolved Problems *Report Date: 11/17/95*

Severity 1	01
Severity 2	03
Severity 3	19
Severity 5	01
TOTAL	24

*severity 4 not used

***This slide represents all unresolved severity 1 and 2 NCRs from Pre-CSR.**

Currently there are 46 severity 5's that have been resolved thru documentation but have not been closed out until I&T verifies the official document.

NCR No.	Severity	State	Platform	Description
190	1	assign	HP	No HP client available for ESST. Code will not compile in CM.
249	1	Verified	sun	The Dependent Valids capability is not implemented
215	1	closed	sun	ESST crashes when attributes are deleted from discrete attribute
208	1	closed	sun	ESST icons do not display text due to color map problem
213	1	closed	sun	ESST is not accepting the invoke and install capability from IOS
234	1	closed	sun	Cannot aquire data via FTPPull or FTPPush through ESST
199	2	closed	sun	Temporal Parameter not visible on initial ESST screen
219	2	closed	sun	Delete Attribute and Clear All buttons do not clear parameter
227	2	closed	sun	Identical buttons for diffeerent parameters on ESST window
240	2	doc'd	sun	ESST does not accept attributes submitted by advertising services
242	2	closed	sun	Turn off GILog messages in the client window

NCR Status (Con't)

*** The following problems were found during the post CSR and pre-ERR period**

NCR No.	Severity	State	Platform	Description
254	2	open	sun	No busy indicators in search results window
256	2	New	sun	ESST crashes when resizing column widths in search results window
257	2	assign	sun	ESST crashes when multiple Adds and Deletes are performed
258	2	Fixed	sun	ESST search results and Product Request Tool scrool bars do not scroll
259	2	WA	sun	Missing check boxes in search results window
255	2	Fixed	sun	HELP option on User Preference Tool does not work
253	2	Fixed	sun	ESST hangs when consecutive browse operations are performed
249	1	Verified	sun	The Dependent Valids capability is not implemented

WA - Work Around **Doc'd - resolution documented and moved to severity 5**

Operational System Test

- EP6 Client DAAC installations
  - see following table for DAAC specific status
- Individual DAAC verification
  - Contacted all DAAC liaisons via Email
  - identified and verified DAAC resources
    - due to Gov. furloughs this phase is still in progress
- Application Server installation completed
- Science Data Server installation completed
- SUN client installation in progress
- HP client installation on hold until porting completed

Operational System Test (cont'd)

- Problems found during deployment excercise
  - DCE exception: not enough memory to call RPC when invoking Comment Survey Tool
  - ECS script for DSS server was not updated for OPS environment
  - Data Dictionary server communication error when selecting catagory from tool
  - Comment Survey category sybase table missing
  - Advertising services does not invoke. HTTPD 500 server error is displayed
  - Application server memory capacity upgraded due to performance

Installation Plan - DAACs

DAAC Liaisons	Affiliation	Host Type	Host Name IP Address	Userld Directory	Phone Number	I&T POC	Host Configuration Status	DCE Inst Cfg		EP6 Client Inst Cfg	
Ellen Chilikas Nettie Labelle-Hamer	ASF	HP	trouble 137.229.37.51	/disk2/src/ep6	chilikas@trouble.gi.alaska.edu 907-474-7329 nettie@borealis.gi.alaska.edu 907-474-6167	FGB		Y			
John Daucsavage Saud Amer	EDC	HP	ecs-hp1 152.61.192.99	/disk2/src/ep6	jdaucs@ecs-hp1.cr.usgs.gov 605-594-6816 samer@ecs-hp1.cr.usgs.gov 605-594-6864	DW					
HTSC	EDF	HP	epserver 192.150.28.17	/home/ep6		PM		Y	Y		
HTSC	EDF	SUN	epdatasrvr 128.183.10.134	/home/ep6		PM	pwd ep6test	Y	Y		
Carolyn Whitaker A.K. Sharma	GSFC	HP	ecsgsfc1 128.183.164.69	/disk2/src/ep6	cwhitake@ecsgafc1.gsfc.nasa.gov 301-286-3997 ssharma@ecsgafc1.gsfc.nasa.gov 301-286-2709	SC		Y			
Don Merritt	JPL	HP	wave 137.79.108.188	/disk2/src/ep6	drm@wave.jpl.nasa.gov 818-306-6061 gms@searider.jpl.nasa.gov 818-354-4527	NW	pwd ep6test	Y			
Glenn Shirtliffe	JPL	SUN	searider 137.78.32.82	/home/ep6test	drm@wave.jpl.nasa.gov 818-306-6061 gms@searider.jpl.nasa.gov 818-354-4527	NW		Y			
Haldun Direskeneli	LaRC	HP	ecs 192.107.191.24		haldun@ecs.larc.nasa.gov 804-864-8890	KG					
Danny Harden	MSFC	HP	hydra 198.116.56.111	/disk2/ep6	hardin@hydra.msfc.nasa.gov 205-922-5804	JK		Y	Y		
Siri Joda Singh Khalsa	NSIDC		snowfall 192.107.194.8	/disk2/src/ep6	marilyn@snowfall.colorado.edu 303-492-1477 sjsk@boreas.colorado.edu 303-492-1445	FGB					
Vickie Ng	ORNL	HP	panda 128.219.50.51		vng@eos.hitc.com 615-241-5920	SC	Tennessee				

Installation Plan - Tirekickers

ECS Tirekicker	Affiliation	Host Type	Host Name IP Address	Userld Directory	Phone Number	I&T POC	Host Configuration Status	DCE Inst	DCE Cfg	EP6 Client Inst	EP6 Client Cfg
Dan Baldwin Bill Emery	Univ. of Colorado				emery@frodo.colorado.edu baldwin@frodo.colorado.edu	SC					
Peter Evans Bob Evans	Univ. of Miami				peter@miami.rsmas.miami.edu Peter 305-361-4801 bob@miami.rsmas.miami.edu	NW					
Sundar Christopher, Ron Welch, Manuel Penaloza	S. Dakota School of Mines				Sundar 605-394-1992 sundar@cloud.ias.sdsmt.edu welch@cloud.ias.sdsmt.edu mpenaloz@front.ias.sdsmt.edu	KG					
Nigel Hinds Tony England	Univ. of Michigan	SUN			nigel@eecs.umich.edu england@eecs.umich.edu	JK	Solaris 2.3	N	N		
Liz Smith Menas Kafados	Old Dominion				lizsmith@ccpo.odu.edu mkafados@compton.gmu.edu	FGB					
David Glover Mike Caruso	Woods Hole				david@plaid.whoi.edu mcaruso@whoi.edu ?? 508-457-2000 ext.2901	DW		N	N		
Paul Bailey Cheryl Craig	NCAR				bailey@ncar.ucar.edu	PM					
Dave Emmitt Sid Wood	Univ. of Virginia				gde@thunder.swa.com saw@thunder.swa.com Dina Bai 804-979-3571	SC					
Wayne Higgins	GSFC DAAC				higgins@higgins.gsfc.nasa.gov	NW	NMC for Ricky Rood				
Chris Justice Nazmi ElSaleous	GSFC DAAC				chris.justice@gsfc.nasa.gov nazmi.elsaleous@gsfc.nasa.gov	KG					

EP6 Evaluation Plan Update

Jan Poston Day
Science Office

November 17, 1995

jposton@eos.hitc.com

Key Terms

- **Independent Evaluators - NASA Tirekickers and other potential end users of the ECS. They will access the EP6 at their own convenience using their own resources in an uncontrolled, or independent environment.**
- **Usability Participants - a subset of the Independent Evaluators who will participate in the usability test sessions conducted at Landover. These participants include experts in human factors and usability research. Usability test sessions will be conducted in a controlled environment using tasks developed for EP6 user scenarios.**
- **Evaluation Period - November 20 - January 31. The 10 week period during which Independent Evaluators will be able to log on and test the EP6.**

Usability Environment & Test

Usability testing will be conducted in the Demo room.

A CCR has been approved for the use of a dedicated workstation for usability testing.

Usability Test Packet has been written and is being tested.

The EP6 Demonstration takes approximately 15 minutes.

The Usability Test will probably take between 60 to 90 minutes depending upon the number of comments made, and questions asked by the Test Participants.

Notes to Evaluators

If you wish to be a usability test Participant please DO NOT use EP6 prior to your usability test in Landover.

Contact me to become a usability Participant:

jposton@eos.hitc.com

Please log on and evaluate EP6 often! Two or more logins over the course of the Evaluation Period is requested.

CST/User Survey

Data will be downloaded every Monday morning at 8.00am during the course of the Evaluation Period

Preliminary EP6 results will be compiled for use by Prototype Workshop 2 (PW2) developers

Sample IET Data Download

Independent Evaluator or Tirekicker

Name	Quest	Score	Date	Time	Comments
tcollins	24	1	Dec 23 1995	2:47:00PM	I really like the zoom and pan
tcollins	25	1	Dec 23 1995	2:47:00PM	features on EOSView.
tcollins	26	1	Dec 23 1995	2:47:00PM	
tcollins	27	1	Dec 23 1995	2:47:00PM	
tcollins	24	2	Dec 28 1995	9:11:00AM	Zoom and pan in EOSView is
tcollins	25	5	Dec 28 1995	9:11:00AM	good, animation too.
tcollins	26	2	Dec 28 1995	9:11:00AM	Access to the RRDB through EP4
tcollins	27	2	Dec 28 1995	9:11:00AM	is a useful feature.

Guest Evaluator

Name	Quest	Score	Date	Time	Comments
guest26	24	5	Dec 22 1995	10:27:00AM	I liked the icons used in the
guest26	25	5	Dec 22 1995	10:27:00AM	Advertising Service for
guest26	26	3	Dec 22 1995	10:27:00AM	subsetting, the scissors are
guest26	27	4	Dec 22 1995	10:27:00AM	clever.
guest45	24	2	Dec 27 1995	2:38:00PM	The drag and drop feature for
guest45	25	2	Dec 27 1995	2:38:00PM	moving services from the Adv.
guest45	26	2	Dec 27 1995	2:38:00PM	Service, and for starting
guest45	27	2	Dec 27 1995	2:38:00PM	EOSView was nice.